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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

KIM, EDWARD J

ART UNIT	PAPER NUMBER
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2455

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/510,221	Applicant(s) PAVLIK ET AL.	
	Examiner EDWARD J. KIM	Art Unit 2455	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 14, 16, 20-23 and 31-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 14, 16, 20-23 and 31-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment filed on 02/26/2009.
2. Claims 11, 14, 16, 20-23, and 31-35 are pending. Claims 11, 14, and 31 have been amended.

Response to Amendment

3. The Examiner withdraws previous 35 USC 112 rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11, 14, 16, 20-22, 31-33, 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchlin et al. ("HIGHROBOT: Telerobotics in the Internet", Copyright 1997), hereinafter referred to as Kuchlin, in view of "Extensible Markup Language (XML) 1.0" (W3C Recommendation 10 February 1998), hereinafter referred to as XML 1.0.

Kuchlin discloses, a system that comprises of a web server that has full access to the Internet and its Web-technologies as well as industrial automation functionalities.

Regarding claim 11, Kuchlin discloses, a plurality of web servers each operable in an automation network and configured to control an automation device (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4. Kuchlin discloses a web server for

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carrying out web server functionalities as well as industrial automation functionalities.), comprising:

a processor; a standard operating system that executes on the processor; a real-time operating system that executes on the processor (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4. Kuchlin discloses a web server, for carrying out web server functionalities and industrial automation functionalities, which incorporates real-time operating system.);

a first software module that provides a web page and that executes on the processor via the standard operating system (Kuchlin, Abstract, section 1, section 3.2, section 4.1. Kuchlin discloses a system that has full access to the internet and its web technologies, where web browsers are utilized.);

a third software module providing an automation functionality to control the automation device and having an interface to the real-time operating system, the functionality including ability to execute control tasks which would otherwise be executed by standalone stored program controls, wherein the functionality of the third module, including execution of the control tasks, is loaded, configured, started and terminated by the web server (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4. Kuchlin discloses a web server, for carrying out web server functionalities and industrial automation functionalities, which incorporates real-time operating system.); and

an application programming interface (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 5. Kuchlin discloses that the software used in the system is

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designed according to object-oriented paradigm, for example programmed in C++ and JAVA, which utilizes APIs.);

a configurable first connection between at least one of the software modules and a software module in another one of the web servers via the application programming interface and the Internet (Kuchlin, Abstract, fig.1, section 1, section 2, section 3.2, section 4, section 5. Kuchlin discloses a system for carrying out web server functionalities as well as industrial automation functionalities, where the software used in the system is designed according to object-oriented paradigm, which utilizes APIs, for example, programmed in C++ and JAVA.); and

a second connection between the at least one of the software modules and the software module in the other one of the web servers, the second connection enabling real time control of an automation device (Kuchlin, section 1, fig.1, section 3.2. Kuchlin discloses a system wherein at least two connections are utilized: a first connection to the Internet -shown in fig.1 LAN, WAN, GAN, etc.- and a second connection between the automation devices -shown in fig.1 CAN-Bus, etc.- for real-time control of the automation devices. These connections are further disclosed in detail in section 1 and section 3.2.).

Although Kuchlin discloses a system that has full access to the internet and its web technologies, where web browsers are utilized (Kuchlin, Abstract, section 1, section 3.2, section 4.1), Kuchlin fails to *explicitly* disclose the use of XML. XML 1.0 discloses the specification of XML which explains the functionality and interoperability of the web via XML. HTML is a predominant markup language for web pages, which provides means to describe the structure of text-based information. XML 1.0 discloses that the

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XML has been designed for ease of implementation and for interoperability with HTML (XML 1.0, Abstract, pg.1 second to last paragraph). XML processors are further disclosed in the first paragraph of pg.4. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Kuchlin with those of XML 1.0 to include XML parsing and processors. One would have been motivated to do so, as it was known in the art that XML is a standard way of structuring data (syntax), which allows the user to define own proprietary data syntax and further build own proprietary tools with ease, which can be interoperable with predominant markup languages for web pages, such as HTML. Also, since the system disclosed by Kuchlin has full access to internet and web technologies and XML was designed to be interoperable with web page languages such as HTML, it would have been obvious to one of ordinary skill in the art to include XML parsing.

Regarding claim 14, Kuchlin disclosed the limitations as described in claim 11, and further discloses wherein for both the first and second connections internet protocols are provided for communication between the at least one of the software modules and the software module in the other one of the web servers with the second connection formed over a network other than the Internet (Kuchlin, section 1, fig.1, section 3.2, Section 4.1, Section 4.2, Section 4.3. Kuchlin discloses that the system is implemented on a common interface protocol, the Internet protocol and utilizes common protocols such as TCP/IP, etc..).

Regarding claim 16, Kuchlin disclosed the limitations as described in claim 11, and further discloses wherein the web server is adapted to configure and administrate the software modules (Kuchlin, section 4.2.2, section 4.2.4).

Regarding claim 20, Kuchlin disclosed the limitations as described in claim 11, and further discloses wherein the automation device is a computer numerical controlled machine (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 4.2. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.).

Regarding claim 21, Kuchlin disclosed the limitations as described in claim 11, and further discloses wherein the automation device is a drive (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 4.2. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.).

Regarding claim 22, Kuchlin disclosed the limitations as described in claim 11, and further discloses wherein the automation device is a valve (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 4.2. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.).

Regarding claim 31, Kuchlin discloses, an automation system that controls an automation device via the Internet, comprising (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.); a first and second web server, comprising;

an application programming interface (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 5. Kuchlin discloses that the software used in the system is designed according to object-oriented paradigm, for example programmed in C++ and JAVA, which utilizes APIs.), and

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a software module for providing an automation functionality to control the automation device via the application programming interface and to directly access a first transport layer, wherein the first server includes an expansion module which controls operation of automation device, the system further including:

first and second connections between the the first and second servers, the first connection being configurable via the Internet to provide access between the software module of the first server and the software module of the second server, the second connection configured over a network other than the Internet, The second connection effecting high speed communication suitable for real time control of the automation device (Kuchlin, fig.1, section 1, section 3.2, section 4, section 4.1, section 4.2. Kuchlin discloses a system wherein at least two connections are utilized: a first connection to the Internet -shown in fig.1 LAN, WAN, GAN, etc.- and a second connection between the automation devices -shown in fig.1 CAN-Bus, etc.- for real-time control of the automation devices. These connections are further disclosed in detail in section 1 and section 3.2. Kuchlin also discloses the use of TCP/IP in the system. It is well-known in the art that the TCP/IP is the best-known example of a Layer 4 Protocol - supported by paragraph [0026] and [0031] of the disclosure by the Applicant. Kuchlin also discloses remote access and control via the internet.).

Regarding claim 32, Kuchlin disclosed the limitations as described in claim 31, and further discloses wherein the industrial automation device is a computer numerical controlled machine (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 4.2. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.).

Regarding claim 33, Kuchlin disclosed the limitations as described in claim 31, and further discloses, wherein the industrial automation device is a drive (Kuchlin, Abstract, section 1, section 2, section 3.2, section 4, section 4.2. Kuchlin discloses a web server for carrying out web server functionalities as well as industrial automation functionalities.).

Regarding claim 34, Kuchlin disclosed the limitations as described in claim 14, and further discloses, wherein the web server is further configured to directly access a transport layer and effect a direct connection between a first protocol stack to which a fourth software module is connected for control of a second automation device, the direct connection effecting direct communication between the third software module and the second software module (Kuchlin, section 1, section 3.2, section 4, section 4.1, section 4.2.).

Regarding claim 35, Kuchlin disclosed the limitations as described in claim 34, and further discloses, wherein the second protocol stack and the fourth software module are integrated in a second web server so that access between the first and second protocol stacks can be effected via the Internet and via the direct connection (Kuchlin, section 1, section 3.2, section 4, section 4.1, section 4.2.).

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuchlin et al. (“HIGHROBOT: Telerobotics in the Internet”, Copyright 1997), hereinafter referred to as Kuchlin, in view of “Extensible Markup Language (XML) 1.0” (W3C Recommendation 10 February 1998), hereinafter referred to as XML 1.0., in further view of Modeste et al. (US Pub. #2003/0056012 A1), hereinafter referred to as Modeste.

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Regarding claim 23, Kuchlin disclosed the limitations as described in claim 11, however, fails to *explicitly* disclose the use of a firewall for connection to the Internet. The use of a firewall for security purposes is well-known in the art as evidenced by Modeste et al. Modeste et al. discloses a web server comprising a connection to the internet utilizing a firewall (Modeste, fig.4, paragraph [0041]). It would have been obvious to one of ordinary skill in the art at the time the invention was made, to implement a firewall into the teachings of Kuchlin, as shown by Modeste, to prevent unauthorized access to the web server and the industrial automation system.

Response to Arguments

7. Applicant's arguments filed 02/26/2009 have been fully considered but they are not persuasive.

The Applicant argues,

“Claims 11 and 31 each now define two connections. The second connection of claim 11 enables real time control of an automation device, and the second connection of claim 31 effects high speed communication suitable for real time control of the automation device.” (refer to pg.6 of the Amendment filed on 02/26/2009)

In response:

Kuchlin discloses a system wherein at least two different connections are utilized: a first connection to the Internet -shown in fig.1 LAN, WAN, GAN, etc.- and a second connection between the automation devices -shown in fig.1 CAN-Bus, etc.- for real time control of the automation devices. These connections are further disclosed in detail in section 1 and section 3.2. (Kuchlin, section 1, fig.1, section 3.2).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWARD J. KIM whose telephone number is (571)270-3228. The examiner can normally be reached on Monday - Friday 7:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward J Kim/
Examiner, Art Unit 2455

/saleh najjar/
Supervisory Patent Examiner, Art Unit 2455